ABSTRACT OF THE DISCLOSURE

A method for removing a stationary noise pattern from digital images uses an adaptive noise estimation algorithm to calculate a prediction of the fixed pattern noise and a confidence estimate for the prediction. In one embodiment, a predicted noise value is obtained from the captured image and a predicted image derived from spatial and temporal pixel value prediction techniques. The predicted noise value is used to update a fixed pattern noise estimate only when the confidence estimate for the predicted image is high. In another embodiment, the confidence estimate is used as a weight factor for blending the noise prediction into the noise estimate. In yet another embodiment, the adaptive noise estimation algorithm is applied to a prediction area in the image for calculating scaling parameters which scaling parameters are used to calculate a noise estimate for the entire image based on a reference noise image.